

Application No.: 10/053396

Case No.: 56313US009

AmendmentsAmendments to the Claims:

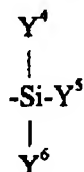
The following Listing of Claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

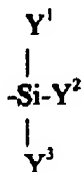
1. (Originally Presented) A fluorochemical composition comprising a major amount of organic solvent and 0.05% by weight to 5% by weight of fluorochemical oligomer dispersed or dissolved in said organic solvent and said fluorochemical oligomer being represented by the general formula:



wherein X represents the residue of an initiator or hydrogen; M^f represents units derived from fluorinated monomers; M^h represents units derived from a non-fluorinated monomers; M^r represents units having a silyl group represented by the formula:



wherein each of Y^4 , Y^5 and Y^6 independently represents an alkyl group, an aryl group or a hydrolyzable group; G is a monovalent organic group comprising the residue of a chain transfer agent; n represents a value of 1 to 100; m represents a value of 0 to 100; r represents a value of 0 to 100; and $n+m+r$ is at least 2; with the proviso that at least one of the following conditions is fulfilled: (a) G is a monovalent organic group that contains a silyl group of the formula:



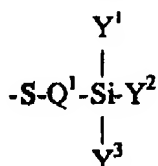
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wherein Y^1 , Y^2 and Y^3 each independently represents an alkyl group, an aryl group or a hydrolyzable group with at least one of Y^1 , Y^2 and Y^3 representing a hydrolyzable group; or (b) r is at least 1 and at least one of Y^4 , Y^5 and Y^6 represents a hydrolyzable group.

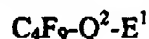
2. (Presently Amended) Fluorochemical composition according to claim 1 wherein at least one of Y^1 , Y^2 and Y^3 and/or at least one of Y^4 , Y^5 and Y^6 is a hydrolyzable group selected from the group consisting of halogen, an alkoxy group, an acyloxy group, an acyl group, and an aryloxy group.

3. (Originally Presented) Fluorochemical composition according to claim 1 wherein said monovalent organic group G corresponds to the general formula:



wherein Y^1 , Y^2 , Y^3 have the meaning as defined in claim 1 or 2 and wherein Q^1 represents an organic divalent linking group.

4. (Originally Presented) Fluorochemical composition according to claim 1 wherein M^f comprises a unit derived from a fluorinated monomer of the formula:

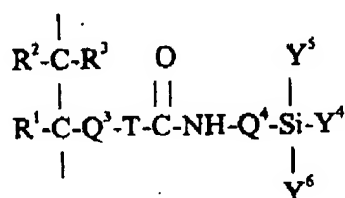


wherein E^1 represents a free radical polymerizable group and Q^2 represents an organic divalent linking group.

5. (Presently Amended) Fluorochemical composition according to claim 1 wherein M^a is a unit derived corresponding to the formula:

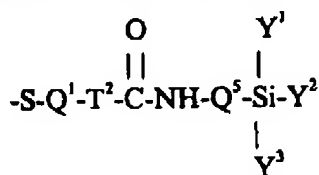
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wherein R¹, R² and R³ each independently represents hydrogen, an alkyl group, an aryl group or halogen, Q³ represents an organic divalent linking group, Q⁴ represents an organic divalent linking group, T represents O or NR with R being hydrogen, an aryl or a C₁-C₄ alkyl group, and Y⁴, Y⁵ and Y⁶ have the meaning as defined in claim 1.

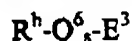
6. (Originally Presented) Fluorochemical composition according to claim 1 wherein G corresponds to the formula:



wherein Q¹ and Q⁵ each independently represents an organic divalent linking group, T² represents O or NR with R being hydrogen, an aryl or a C₁-C₄ alkyl group, and Y¹, Y² and Y³ have the meaning as defined in claim 1.

7. (Originally Presented) Fluorochemical composition according to claim 1 wherein the composition is a homogeneous composition further comprising water and an organic or inorganic acid.

8. (Presently Amended) Fluorochemical composition according to claim 1 wherein the units derived from non-fluorinated monomers ~~are units derived from non-fluorinated monomers~~ corresponding to the general formula:



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wherein R^h represents a hydrocarbon group, Q^6 is a divalent linking group, s is 0 or 1 and E^3 is a free radical polymerizable group.

9. (Originally Presented) Method of treating a substrate comprising applying to said substrate a composition according to claim 1.

10. (Originally Presented) Method of treating a substrate comprising applying to said substrate a composition according to claim 1 and exposing a thus obtained coated substrate to water and an organic or inorganic acid.

11. (Originally Presented) Method of treating a substrate according to claim 9 further comprising the step of exposing the coated substrate to an elevated temperature of 60°C to 300°C.

12. (Presently Amended) Method according to claim 9 wherein said substrate is selected from the group consisting of plastics, ceramics, and glass.

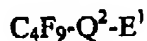
13. (Presently Amended) Substrate comprising a coating derivable from the coating composition of any of claim 1 wherein the substrate is selected from the group consisting of plastics, ceramics, and glass.

14. (Originally Presented) Fluorochemical oligomer corresponding to the formula:



wherein X represents the residue of an initiator or hydrogen;

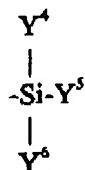
M^f represents units derived from fluorinated monomers having the formula:



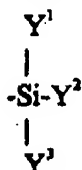
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wherein E^1 represents a free radical polymerizable group and Q^2 represents an organic divalent linking group; M^h represents units derived from non-fluorinated monomers; M^a represents units having a silyl group represented by the formula:

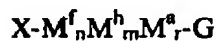


wherein each of Y^4 , Y^5 and Y^6 independently represents an alkyl group, an aryl group or a hydrolyzable group, with the proviso that at least one of Y^4 , Y^5 and Y^6 represents a hydrolyzable group; G represents a monovalent organic group comprising the residue of a chain transfer agent; n represents an integer of 1 to 100; m represents an integer of 0 to 100; r represents an integer of 0 to 100; and $n+m+r$ is at least 2; with the proviso that at least one of the following conditions is fulfilled: (a) G is a monovalent organic group that contains a silyl group of the formula:



wherein Y^1 , Y^2 and Y^3 each independently represents an alkyl group, an aryl group or a hydrolyzable group with at least one of Y^1 , Y^2 and Y^3 representing a hydrolyzable group; or (b) r is at least 1 and at least one of Y^4 , Y^5 and Y^6 represents a hydrolyzable group.

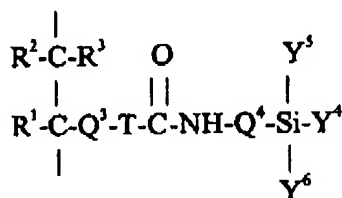
15. (Presently Amended) Fluorochemical oligomer having the formula:



wherein X represents the residue of an initiator or hydrogen; M^f represents units derived from fluorinated monomers; M^h represents units derived from non-fluorinated monomers; M^a represents units having the formula:

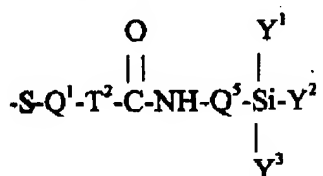
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wherein R^1 , R^2 and R^3 each independently represents hydrogen, an alkyl group, an aryl group or halogen, Q^3 represents an organic divalent linking group, Q^4 represents an organic divalent linking group, T represents O or NR with R being hydrogen, an aryl or a C_1 - C_4 alkyl group, and wherein each of Y^4 , Y^5 and Y^6 independently represents an alkyl group, an aryl group or a hydrolyzable group, with the proviso that at least one of Y^4 , Y^5 and Y^6 represents a hydrolyzable group; G represents a monovalent organic group comprising the residue of a chain transfer agent; n represents an integer of 1 to 100; m represents an integer of 0 to 100; r represents an integer of 1 to 100; and $n+m+r$ is at least 2.

16. (Originally Presented) Fluorochemical oligomer according to claim 15 wherein G corresponds to the formula:



wherein Q^1 and Q^3 each independently represents an organic divalent linking group, T^2 represents O or NR with R being hydrogen, an aryl or a C_1 - C_4 alkyl group, and Y^1 , Y^2 and Y^3 each independently represents an alkyl group, an aryl group or a hydrolyzable group with at least one of Y^1 , Y^2 and Y^3 representing a hydrolyzable group.

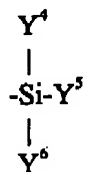
17. (Originally Presented) Fluorochemical oligomer having the formula:



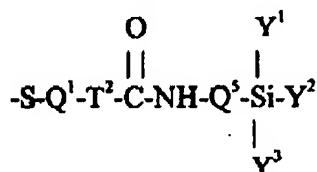
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wherein X represents the residue of an initiator or hydrogen; M^f represents units derived from fluorinated monomers; M^h represents units derived from a non-fluorinated monomers; M^a represents units having a silyl group represented by the formula:



wherein each of Y^4 , Y^5 and Y^6 independently represents an alkyl group, an aryl group or a hydrolyzable group, with the proviso that at least one of Y^4 , Y^5 and Y^6 represents a hydrolyzable group; G corresponds to the formula:



wherein Q^1 and Q^5 each independently represents an organic divalent linking group, T^2 represents O or NR with R being hydrogen, an aryl or a C_1 - C_4 alkyl group, and Y^1 , Y^2 and Y^3 each independently represents an alkyl group, an aryl group or a hydrolyzable group with at least one of Y^1 , Y^2 and Y^3 representing a hydrolyzable group; n represents an integer of 1 to 100; m represents an integer of 0 to 100; r represents an integer of 0 to 100; and $n+m+r$ is at least 2.